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L4 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:878425 HCAPLUS

DOCUMENT NUMBER: 141:366918

TITLE: VOC-free **latex** coalescent systems containing unsaturated esters, and/or ethers and low-glass transition-temperature **latex** resinsINVENTOR(S): Sugerman, Gerald; Cosby, James V.

PATENT ASSIGNEE(S): Vocfree, Inc., USA

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004090005	A1	20041021	WO 2004-US10667	20040405
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005014877	A1	20050120	US 2004-853516	20040524
PRIORITY APPLN. INFO.:			US 2003-460096P	P 20030403
			US 2003-473080P	P 20030523
			WO 2004-US10667	W 20040405

AB Combinations of nonvolatile, unsatd. ethers and/or esters, small proportions of **latex** resins with low glass transition temperature (T_g), and optionally nonvolatile reactive amines as replacements for conventionally employed volatile organic compds. (VOCs) as coalescents are used in low/no VOC-containing acrylic-styrenic copolymers, polyesters, polyurethanes and vinyl copolymers, for coatings, paints, and inks.

IC ICM C08F265-06
ICS C08F265-04

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 42

ST **latex** coalescent system VOC free coating; paint unsatd ester ether **latex** coalescent; ink **latex** coalescent VOC free

IT Chlorosulfonated polyethylene rubber

RL: NUU (Other use, unclassified); USES (Uses)

(Hypalon 40, coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature

latex resins)

IT Neoprene rubber, uses

RL: NUU (Other use, unclassified); USES (Uses)

(Neoprene WR, coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature

latex resins)

IT Inks

Paints

(VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT Acrylic polymers, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT Coalescence

(agents; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT Construction materials

Floors

(coatings; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT Coating materials

(**latex**; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT Vinyl compounds, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polymers; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT Esters, uses

Ethers, uses

RL: NUU (Other use, unclassified); USES (Uses)

(unsatd., coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass

transition-temperature

latex resins)

IT 9003-20-7, Poly(vinyl acetate)

RL: NUU (Other use, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(Ucar 371, Rhoplex 3077; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass

transition-temperature

latex resins)

IT 19727-16-3, Trimethylolpropane dimethacrylate 777081-10-4, 2,2-Bis(furoic acid) 2-propenyl ester

RL: NUU (Other use, unclassified); USES (Uses)

(VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT 100-42-5D, Styrene, polymers 148264-14-6, Maincote AE 58

185323-75-5, HG 56 778596-00-2, HG 54 778596-14-8, E 2350

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT 9002-88-4

RL: NUU (Other use, unclassified); USES (Uses)

(chlorosulfonated polyethylene rubber, Hypalon 40, coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT 63971-15-3, Dipentaerythritol tetraacrylate 121546-85-8, Butvar BR

152383-40-9 777078-65-6 777078-66-7 777078-67-8

777093-75-1 777093-76-2 778595-86-1, Rhoplex 9100

RL: NUU (Other use, unclassified); USES (Uses)
(coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT 9010-98-4

RL: NUU (Other use, unclassified); USES (Uses)
(neoprene rubber, Neoprene WR, coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

IT 9003-20-7, Poly(vinyl acetate)

RL: NUU (Other use, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(Ucar 371, Rhoplex 3077; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass

transition-temperature

latex resins)

RN 9003-20-7 HCAPLUS

CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4

CMF C4 H6 O2

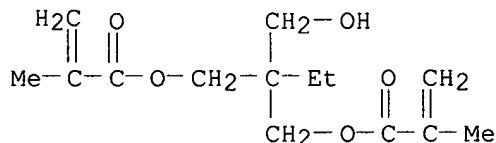
AcO-CH=CH₂

IT 19727-16-3, Trimethylolpropane dimethacrylate

RL: NUU (Other use, unclassified); USES (Uses)
(VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

RN 19727-16-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-(hydroxymethyl)-1,3-propanediyl ester (9CI) (CA INDEX NAME)



IT 100-42-5D, Styrene, polymers 148264-14-6, Maincote AE 58

185323-75-5, HG 56

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

RN 100-42-5 HCAPLUS

CN Benzene, ethenyl- (9CI) (CA INDEX NAME)

H₂C=CH-Ph

RN 148264-14-6 HCAPLUS

CN Maincote AE 58 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 185323-75-5 HCAPLUS

CN Maincote HG 56 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 152383-40-9

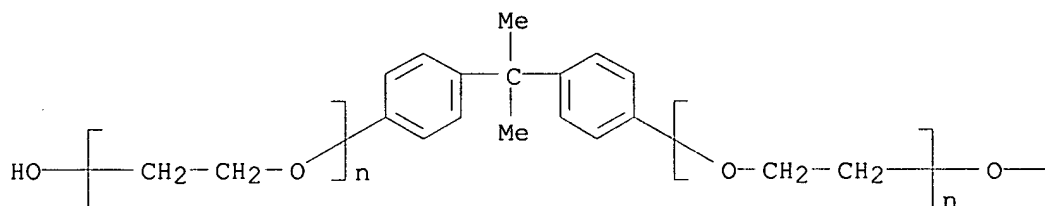
RL: NUU (Other use, unclassified); USES (Uses)

(coalescent; VOC-free **latex** coalescent systems containing unsatd. esters, and/or ethers and low-glass transition-temperature **latex** resins)

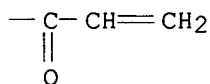
RN 152383-40-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), ω -hydroxy- ω' -[(1-oxo-2-propenyl)oxy]- α, α' -[(1-methylethylidene)di-4,1-phenylene]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:421733 HCAPLUS

DOCUMENT NUMBER: 131:89141

TITLE: Preparation of acrylic-based copolymer **latex** coatings with low environmental toxicityINVENTOR(S): **Sugerman, Gerald**

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9932563	A2	19990701	WO 1997-US24224	19971219

WO 9932563 A3 20050506
 W: AU, BR, CA, HU, JP, MX, NO, RU, SE, SG, TR, US
 RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 CA 2314975 AA 19990701 CA 1997-2314975 19971219
 AU 9860143 A1 19990712 AU 1998-60143 19971219
 BR 9714916 A 20001226 BR 1997-14916 19971219
 EP 1549142 A2 20050706 EP 1997-954808 19971219

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI
 PRIORITY APPLN. INFO.: WO 1997-US24224 A 19971219

AB Low- or no VOC acrylic and vinyl copolymer **latex**, useful for coatings, paints and inks, is prepared by using nonvolatile reactive amines as neutralizers, (non)hydroxyl-containing unsatd. esters and/or ethers and/or ether-esters and saturated hydroxyl-containing etherified and/or esterified oligomeric glycols and/or oligools as coalescents, and hypersurfactants replacing volatile amines and/or ammonia, organic solvents, and conventional soaps and/or dispersants and/or detergents, resp.

IC ICM C09D

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 37

ST acrylic vinyl copolymer **latex** coating toxicity; nonvolatile reactive amine neutralizer **latex** coating; hydroxyl unsatd ester ether coalescent **latex**; satd polyether polyester polyol coalescent **latex**; hypersurfactant **latex** coating reducing emission

IT Inks

Latex

(acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT Coalescence

(agents, coalescents; acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT Neutralization

(agents; acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT Coating materials

(emulsion; acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT Surfactants

(hyper; acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT Paints

(**latex**; acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT Acrylic polymers, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(polymers with vinyl monomers; acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT 100-42-5D, Styrene, copolymer with acrylic monomers

9003-20-7, PVA 148264-14-6, Maincote AE 58

229959-65-3, Flexbond 285 229959-69-7, Flexbond 28

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(acrylic-based copolymer **latex** coatings with low environmental toxicity)

IT 57-55-6, 1,2-Propanediol, uses 14697-46-2D,

1,2,5-Pentanetriol, trimer, Et ethers 19727-16-3

23778-52-1, Penta(ethylene glycol) monomethyl ether

51728-68-8 71244-11-6, PmPE 78146-71-1

152383-40-9 228718-11-4 228718-12-5

228718-13-6 228718-14-7 228718-15-8
 228718-16-9 228718-17-0 228718-18-1
 228857-61-2 228857-67-8

RL: NUU (Other use, unclassified); USES (Uses)
 (coalescents; preparation of acrylic-based copolymer **latex**
 coatings with low environmental toxicity)

IT 88-12-0, uses 7005-47-2, DMAMP 80 16889-06-8
 65654-32-2 111774-36-8 228718-06-7
 228718-07-8 228718-08-9 228718-09-0
 228718-10-3

RL: MOA (Modifier or additive use); USES (Uses)
 (neutralizer; preparation of acrylic-based copolymer **latex**
 coatings with low environmental toxicity)

IT 56-86-0D, Glutamic acid, Et derivative

RL: MOA (Modifier or additive use); USES (Uses)
 (preparation of acrylic-based copolymer **latex** coatings with low
 environmental toxicity)

IT 185323-75-5, Maincote HG 56 229959-58-4, AC 625

RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (preparation of acrylic-based copolymer **latex** coatings with low
 environmental toxicity)

IT 9063-51-8, Tamol 850 37199-81-8, Tamol 731

RL: MOA (Modifier or additive use); USES (Uses)
 (surfactant; acrylic-based copolymer **latex** coatings with low
 environmental toxicity)

IT 9016-45-9, Triton N 101 60864-33-7, Triton CF 10
 63713-74-6 228718-19-2 228718-20-5
 228718-21-6 228718-22-7 228718-23-8
 228857-68-9

RL: MOA (Modifier or additive use); USES (Uses)
 (surfactant; preparation of acrylic-based copolymer **latex** coatings
 with low environmental toxicity)

IT 100-42-5D, Styrene, copolymer with acrylic monomers
 9003-20-7, PVA 148264-14-6, Maincote AE 58
 229959-65-3, Flexbond 285 229959-69-7, Flexbond 28

RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); USES (Uses)
 (acrylic-based copolymer **latex** coatings with low
 environmental toxicity)

RN 100-42-5 HCAPLUS

CN Benzene, ethenyl- (9CI) (CA INDEX NAME)

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

RN 9003-20-7 HCAPLUS

CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4

CMF C4 H6 O2

$\text{AcO}-\text{CH}=\text{CH}_2$

RN 148264-14-6 HCAPLUS

CN Maincote AE 58 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 229959-65-3 HCAPLUS

CN Flexbond 285 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 229959-69-7 HCAPLUS

CN Flexbond 28 (9CI) (CA INDEX NAME)

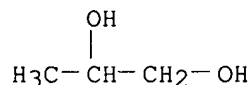
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IT 57-55-6, 1,2-Propanediol, uses 14697-46-2D,
1,2,5-Pentanetriol, trimer, Et ethers 19727-16-3
23778-52-1, Penta(ethylene glycol) monomethyl ether
51728-68-8 71244-11-6, PmPE 78146-71-1
152383-40-9 228718-11-4 228718-12-5
228718-13-6 228718-14-7 228718-15-8
228718-16-9 228718-17-0 228718-18-1
228857-61-2 228857-67-8

RL: NUU (Other use, unclassified); USES (Uses)
(coalescents; preparation of acrylic-based copolymer latex
coatings with low environmental toxicity)

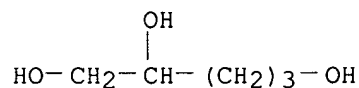
RN 57-55-6 HCAPLUS

CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



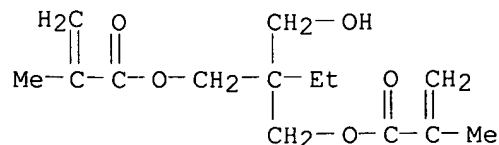
RN 14697-46-2 HCAPLUS

CN 1,2,5-Pentanetriol (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



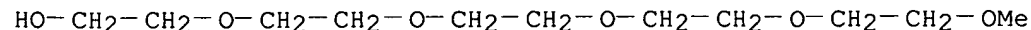
RN 19727-16-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-(hydroxymethyl)-1,3-propanediyl
ester (9CI) (CA INDEX NAME)



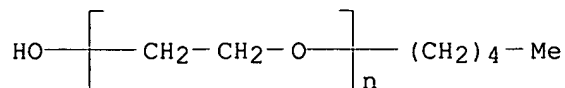
RN 23778-52-1 HCAPLUS

CN 2,5,8,11,14-Pentaoxahexadecan-16-ol (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 51728-68-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -pentyl- ω -hydroxy- (9CI) (CA INDEX NAME)



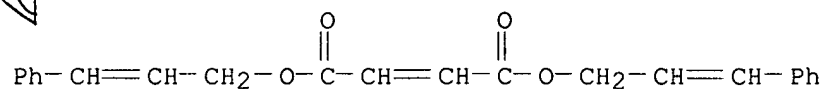
RN 71244-11-6 HCAPLUS

CN PmPE (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 78146-71-1 HCAPLUS

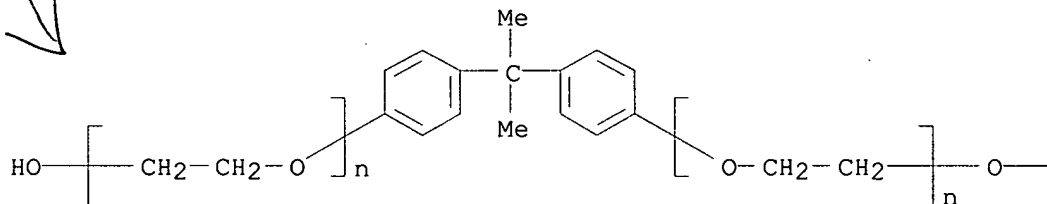
CN 2-Butenedioic acid (2Z)-, bis(3-phenyl-2-propenyl) ester (9CI) (CA INDEX NAME)



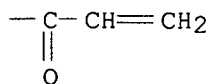
RN 152383-40-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), ω -hydroxy- ω' -[(1-oxo-2-propenyl)oxy]- α,α' -[(1-methylethylidene)di-4,1-phenylene]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

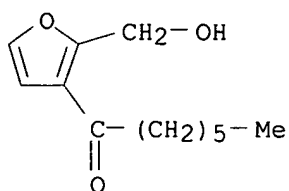


PAGE 1-B



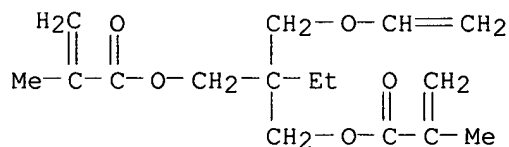
RN 228718-11-4 HCAPLUS

CN 1-Heptanone, 1-[2-(hydroxymethyl)-3-furanyl]- (9CI) (CA INDEX NAME)



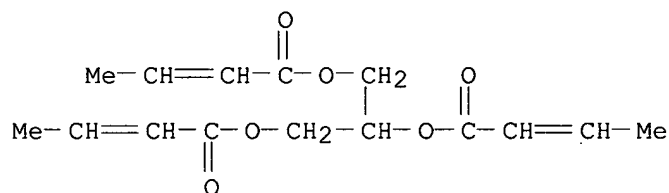
RN 228718-12-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[(ethenyloxy)methyl]-2-ethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)



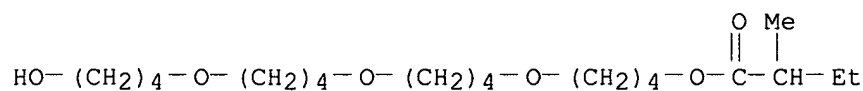
RN 228718-13-6 HCAPLUS

CN 2-Butenoic acid, 1,2,3-propanetriyl ester (9CI) (CA INDEX NAME)



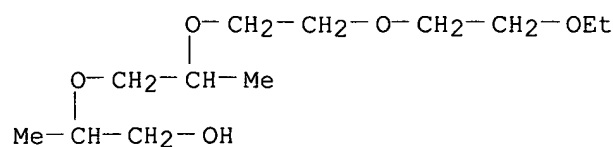
RN 228718-14-7 HCAPLUS

CN Butanoic acid, 2-methyl-, 4-[4-[4-(4-hydroxybutoxy)butoxy]butoxy]butyl ester (9CI) (CA INDEX NAME)



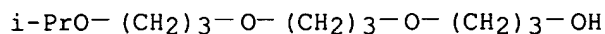
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CN 3,6,9,12-Tetraoxatetradecan-1-ol, 2,5-dimethyl- (9CI) (CA INDEX NAME)



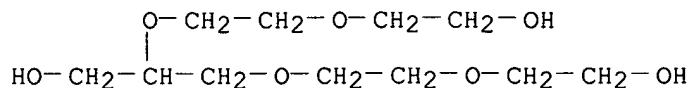
RN 228718-16-9 HCAPLUS

CN 1-Propanol, 3-[3-[3-(1-methylethoxy)propoxy]propoxy]- (9CI) (CA INDEX NAME)



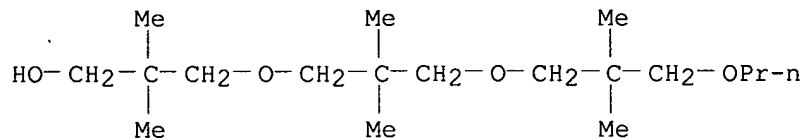
RN 228718-17-0 HCAPLUS

CN 3,6,9,12-Tetraoxatetradecane-1,14-diol, 7-(hydroxymethyl)- (9CI) (CA INDEX NAME)



RN 228718-18-1 HCAPLUS

CN 1-Propanol, 3-[3-(2,2-dimethyl-3-propoxypropoxy)-2,2-dimethylpropoxy]-2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 228857-61-2 HCAPLUS

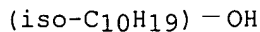
CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monoisodecenyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 228857-60-1

CMF C10 H20 O

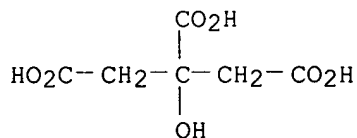
CCI IDS



CM 2

CRN 77-92-9

CMF C6 H8 O7



RN 228857-67-8 HCAPLUS

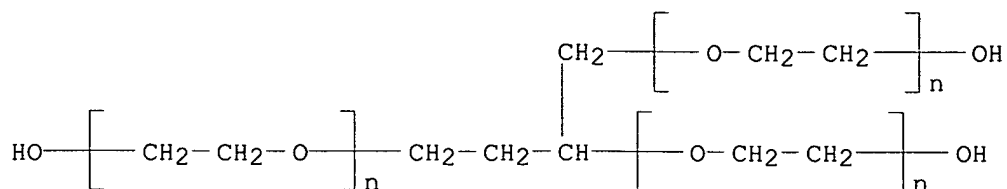
CN Poly(oxy-1,2-ethanediyl), $\alpha, \alpha', \alpha''$ -1,2,4-butanetriyltris[ω -hydroxy-, dipropionate (9CI) (CA INDEX NAME)

CM 1

CRN 228857-66-7

CMF (C2 H4 O)_n (C2 H4 O)_n (C2 H4 O)_n C4 H10 O3

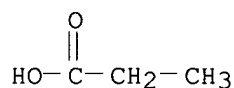
CCI PMS



CM 2

CRN 79-09-4

CMF C3 H6 O2



IT 88-12-0, uses 7005-47-2, DMAMP 80 16889-06-8

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228718-07-8 228718-08-9 228718-09-0

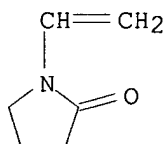
228718-10-3

RL: MOA (Modifier or additive use); USES (Uses)

(neutralizer; preparation of acrylic-based copolymer latex coatings with low environmental toxicity)

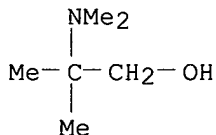
RN 88-12-0 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl- (9CI) (CA INDEX NAME)



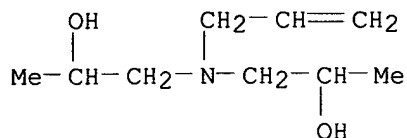
RN 7005-47-2 HCAPLUS

CN 1-Propanol, 2-(dimethylamino)-2-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



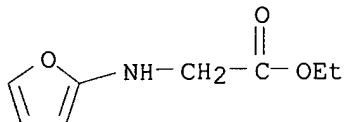
RN 16889-06-8 HCAPLUS

CN 2-Propanol, 1,1'-(2-propenylimino)bis- (9CI) (CA INDEX NAME)



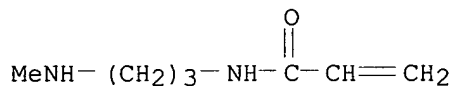
RN 65654-32-2 HCAPLUS

CN Glycine, N-2-furanyl-, ethyl ester (9CI) (CA INDEX NAME)



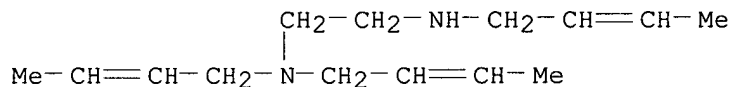
RN 111774-36-8 HCAPLUS

CN 2-Propenamide, N-[3-(methylanino)propyl]- (9CI) (CA INDEX NAME)



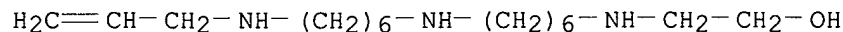
RN 228718-06-7 HCAPLUS

CN 1,2-Ethanediamine, N,N,N'-tri-2-butenyl- (9CI) (CA INDEX NAME)



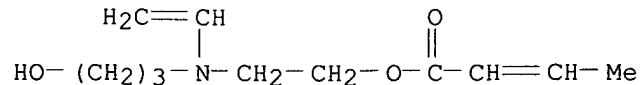
RN 228718-07-8 HCAPLUS

CN Ethanol, 2-[[6-[[6-(2-propenylamino)hexyl]amino]hexyl]amino]- (9CI) (CA INDEX NAME)



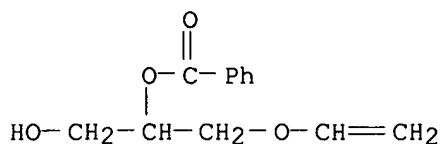
RN 228718-08-9 HCAPLUS

CN 2-Butenoic acid, 2-[ethenyl(3-hydroxypropyl)amino]ethyl ester (9CI) (CA INDEX NAME)



RN 228718-09-0 HCAPLUS

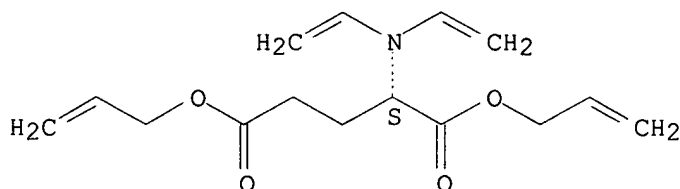
CN 1,2-Propanediol, 3-(ethenyloxy)-, 2-benzoate (9CI) (CA INDEX NAME)



RN 228718-10-3 HCAPLUS

CN L-Glutamic acid, N,N-diethenyl-, di-2-propenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 56-86-0D, Glutamic acid, Et derivative

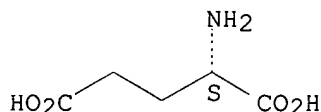
RL: MOA (Modifier or additive use); USES (Uses)

(preparation of acrylic-based copolymer **latex** coatings with low environmental toxicity)

RN 56-86-0 HCAPLUS

CN L-Glutamic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 185323-75-5, Maincote HG 56 229959-58-4, AC 625

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(preparation of acrylic-based copolymer **latex** coatings with low environmental toxicity)

RN 185323-75-5 HCAPLUS

CN Maincote HG 56 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 229959-58-4 HCAPLUS

CN AC 625 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 9063-51-8, Tamol 850 37199-81-8, Tamol 731

RL: MOA (Modifier or additive use); USES (Uses)

(surfactant; acrylic-based copolymer **latex** coatings with low environmental toxicity)

RN 9063-51-8 HCAPLUS

CN Tamol 850 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 37199-81-8 HCAPLUS

CN 2,5-Furandione, polymer with 2,4,4-trimethylpentene, sodium salt (9CI)
(CA INDEX NAME)

CM 1

CRN 34229-21-5

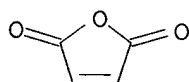
CMF (C8 H16 . C4 H2 O3)x

CCI PMS

CM 2

CRN 108-31-6

CMF C4 H2 O3



CM 3

CRN 25167-70-8

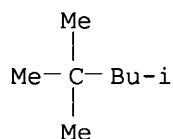
CMF C8 H16

CCI IDS

CM 4

CRN 540-84-1

CMF C8 H18

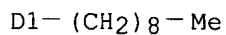
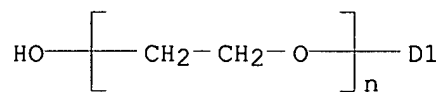


IT 9016-45-9, Triton N 101 60864-33-7, Triton CF 10
63713-74-6 228718-19-2 228718-20-5
228718-21-6 228718-22-7 228718-23-8
228857-68-9

RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; preparation of acrylic-based copolymer **latex** coatings
with low environmental toxicity)

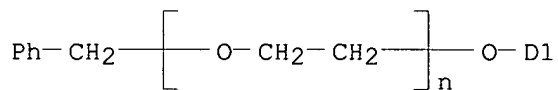
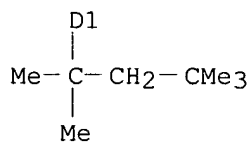
RN 9016-45-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -(nonylphenyl)- ω -hydroxy- (9CI)
(CA INDEX NAME)



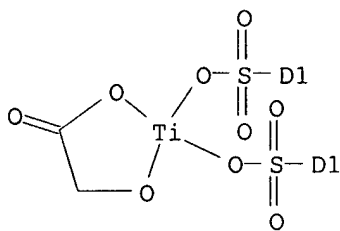
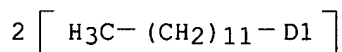
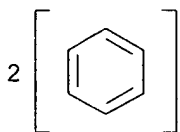
RN 60864-33-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -(phenylmethyl)- ω -[(1,1,3,3-tetramethylbutyl)phenoxy]- (9CI) (CA INDEX NAME)



RN 63713-74-6 HCAPLUS

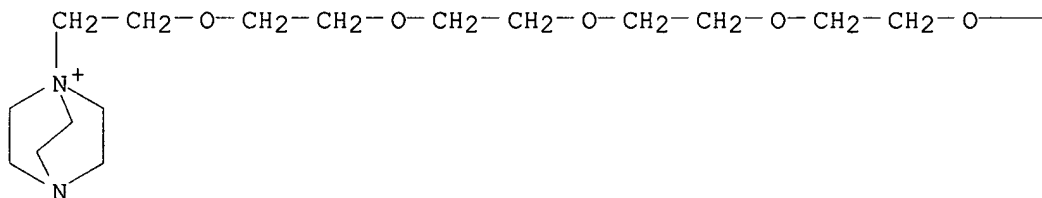
CN Titanium, bis(dodecylbenzenesulfonato- κO) [(hydroxy- κO)acetato(2-)- κO]- (9CI) (CA INDEX NAME)



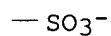
RN 228718-19-2 HCAPLUS

CN 4-Aza-1-azoniabicyclo[2.2.2]octane, 1-[14-(sulfooxy)-3,6,9,12-tetraoxatetradec-1-yl]-, inner salt (9CI) (CA INDEX NAME)

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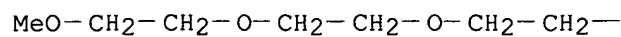
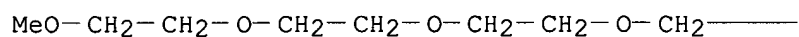
RN 228718-20-5 HCAPLUS

CN Zirconate(6-), tris[mono-octyl diphosphato(3-)-κO',κO''](octyloxy)-, hexahydrogen (9CI) (CA INDEX NAME)

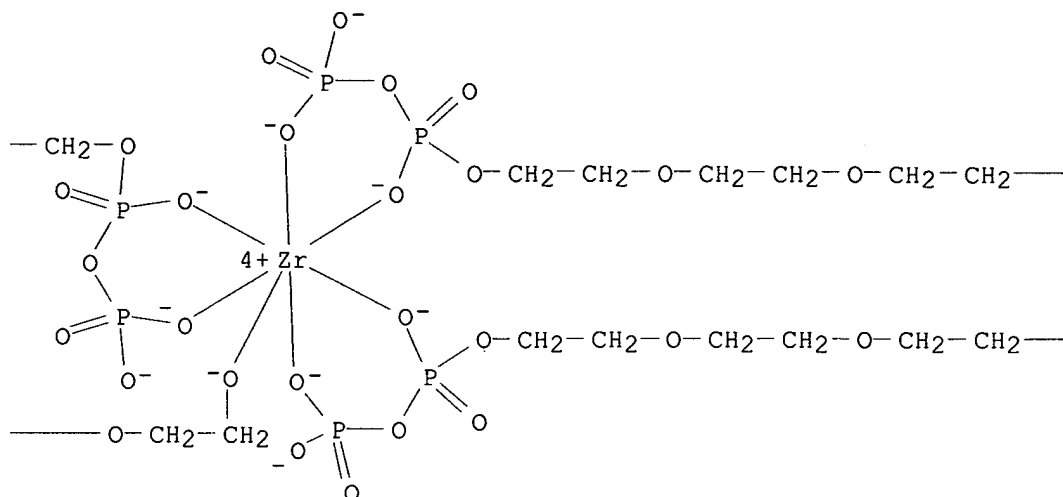
The diagram shows a central Zirconium (Zr) atom with a +4 charge, labeled "4+ Zr". It is coordinated by four phosphate groups and four heptyl chains. Each phosphate group is represented by a phosphorus (P) atom double-bonded to one oxygen (O) and single-bonded to three others, one of which is an oxygen with a negative charge (O⁻). The four phosphate groups are arranged in a tetrahedral-like fashion around the central Zr atom. Each phosphate group is also bonded to a heptyl chain, represented as "Me-(CH₂)₇-". The heptyl chains are oriented outwards from the central complex.

● 6 H⁺

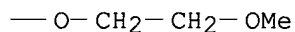
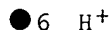
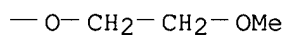
PAGE 1-A



PAGE 1-B

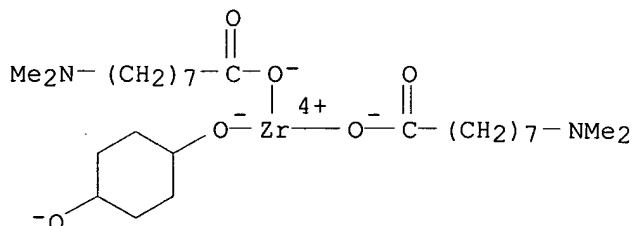


PAGE 1-C



RN 228718-22-7 HCAPLUS

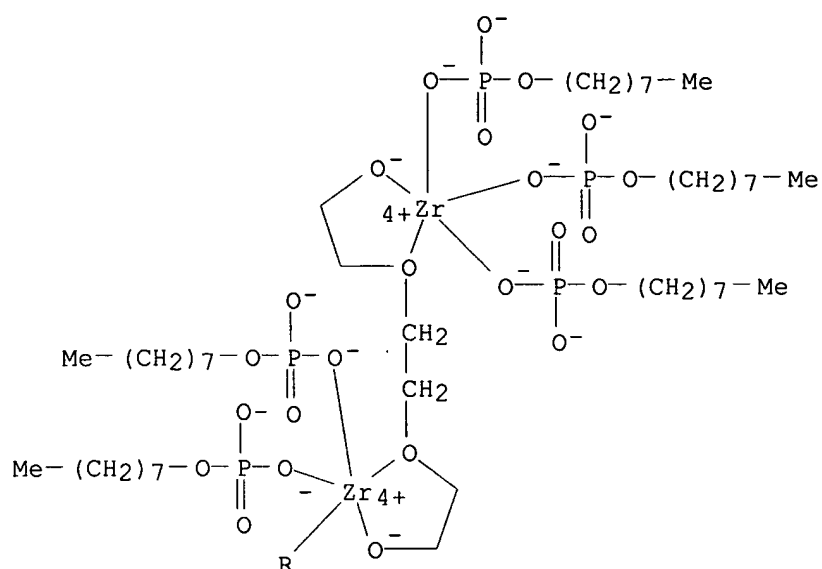
CN Zirconium, [1,4-cyclohexanediolato(2-)-κO]bis[8-(dimethylamino)octanoato-κO]- (9CI) (CA INDEX NAME)



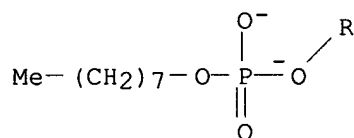
RN 228718-23-8 HCAPLUS

CN Zirconate(6-), [μ-[[2,2'-[1,2-ethanediylbis(oxy-κO)]bis[ethanolato-κO]](2-)]hexakis[mono-octylphosphato(2-)-κO']di-, hexahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● 6 H⁺

RN 228857-68-9 HCAPLUS
 CN Phosphonic acid, [4-[6-(4-methylmorpholinyl)octyl]phenyl]- (9CI) (CA
 INDEX NAME)

